faces this arm. On viewing these features that are thus common to the disrupted craters situated on the borders of this *Mare*, one almost feels disposed to venture a conjecture that here we have the means of approximating to the successive ages of some of the crateriform productions on the lunar surface. "Every thing which tends to throw light on the manner in which the inequalities on the Moon's surface have originated," says Arago, "is eminently deserving of attention." Taking *Doppelmayer*, south-east, and *Hippalus*, north-west, we have evidence of the disruptive force existing between them, in fact extending south-eastward, south-westward, and north-westward. Has this force any connexion with the overspreading of the *Mare* with its plain-like covering? Assuming for a moment that such is the case, we do not know that it is so, we have the two craters named with the two unnamed more ancient than the overspreading of the *Mare* itself—the small unnamed crater being more recent than the one near which it stands and which it partially covers, and probably more recent than the other three. The age of *Vitello*—with its still perfect walls closely adjoining as they do the western flank of the large unnamed crater—more recent than the period of the overspreading of the *Mare;* and the magnificent *Gassendi*, also more recent than this period, probably marking an epoch, the most recent of the violent outbursts which produced such magnificent craters as the one just named, *Copernicus*, *Tycho*, *Plato*, and several others which appear to be most perfect, *Copernicus* having suffered considerably from degradating agencies.

On an Appearance on the Surface of Jupiter, which passed rapidly over the Disk of the Planet. By W. R. Birt, Esq.

On the 22d of March, 1861, at about 7^h 20^m G.M.T., I noticed near the eastern limb of *Jupiter* a difference in the breadth of the northern belt, a small portion near the limb was about half the breadth of the remainder, which extended to near the western limb, the termination of the half-breadth of the broadest was rugged and irregular; about 40 minutes later, viz. at 8^h, this ragged portion occupied the centre of the disk with a somewhat dark spot near its termination. At 9^h 15^m this portion had arrived within a tenth of the longest diameter of the disk from the western limb. When next I noticed *Jupiter* it was gone, and he had two well-defined narrow belts; at 11^h I observed a fine line-like belt just north of the narrow belt.

Was this an instance of a rapid propagation of cloud in the atmosphere of the planet?

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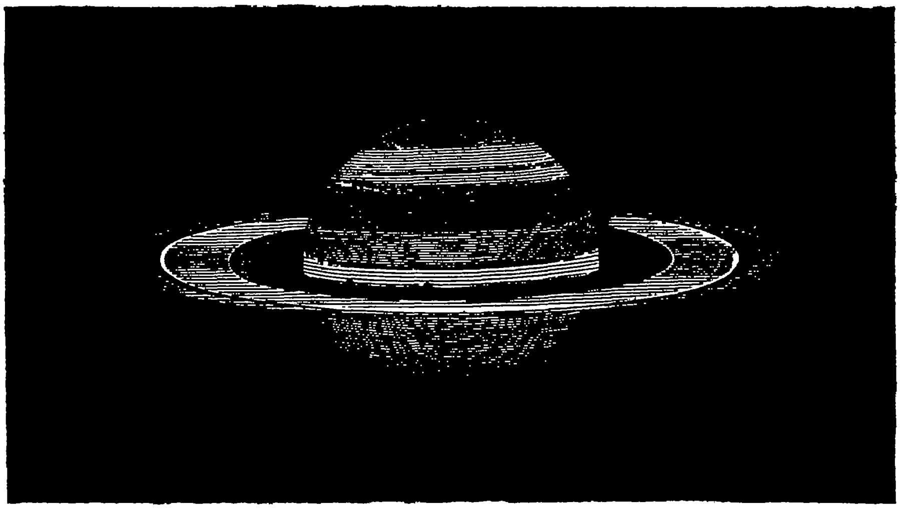
1861MNRAS..21R.177D

Observations of Saturn. By Warren De La Rue, Esq.

While observing *Saturn* during the last few weeks my attention has been attracted by the very irregular outline of the shadow crossing the planet's northern hemisphere just above the inner dark ring. I noticed this very distinctly on the night of the 7th instant, when my 13-inch Newtonian Equatoreal bore a power of 700 perfectly well. On that and other occasions I scrutinised the planet with a very beautiful achromatic by Dallmeyer (the late Mr. Ross's son-in-law) of $4\frac{1}{8}$ inches aperture, and I noticed the same appearance, so that astronomers possessing instruments of moderate size may observe the phenomenon provided they define perfectly. It is right to mention that the achromatic I refer to shows the 5th and 6th stars in the trapezium of *Orion*, and that on a clear night I even made out *Enceladus*, having first observed it, however, with the 13-inch reflector.



Cranford, April 11, 1861.

Photographs of the Total Eclipse.
By Warren De La Rue, Esq.

I am desirous of an opportunity of making known to Astronomers that some further delay will take place before copies of the two totality pictures can be printed off for circulation. In order to show the details of the protuberances it is necessary to enlarge the copies to about 9 inches in diameter, and from these to make a sufficient number of negatives to print the paper copies it is proposed to publish.

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